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Some clinical and epidemiological studies on Strangles in equines

Thesis presented by

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(Infectious diseases)

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Abstract

Present study was undertaken to study the incidence of β -haemolytic streptococci infection in equine, especially *Streptococcus equi* subsp. *Equi* infection (strangles). On clinical examination of a community of 524 Arabian foals and horses in Cairo – Egypt, a total of 164 animals were detected showing respiratory signs resemble that of Strangles (31.3 %) of which 62 (11.8 %) showed respiratory signs and lymph nodes abscessation. Two hundred and twenty-six swabs; 164 nasopharyngeal, 31 submaxillary lymph node pus and 31 retropharyngeal lymph node pus; were collected from 164 foals and horses showing respiratory signs and/ or abscessed lymph nodes for Streptococci isolation and PCR confirmation.

A total of 150 isolates of Streptococci were recovered from 226 samples with sample-wise prevalence of (66.4%). Out of these isolates; 124 (82.7%) were identified as *Streptococcus equi* subsp. *equi*, 26 (17.3%) *S. equi* subsp. *zooepidemicus* and no *S. dysgalactiae* subsp. *equisimilis* were identified.

The incidence of *S. equi* subsp. *Equi* and *S. equi* subsp. *Zooepidemicus* infection among the total animal population, in the present study, was 11.83 and 4.96 % respectively. PCR technique showed high sensitivity and specificity for the detection of *S. equi* species in the examined samples.

KEYWORDS: β -haemolytic streptococci, *Streptococcus equi*, *Streptococcus zooepidemicus*, *Streptococcus equisimilis*, horses, Strangles, incidence, clinical signs, PCR, Cairo, Egypt.

Dedication

I dedicate this work to my parents, wife, sons and siblings for all the support they lovely offered during my post-graduate studies.

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List of Abbreviations

(n = 1010)	Number = 1010
°C	Degree centigree
♀	Female
♂	Male
A.D	after death
B.C.	before Christ
bp	Base pair
CBC	Complete Blood Count
DNA	Deoxyribonucleic acid
e.g.	exempli gratia
ELISA	Enzyme Linked Immunosorbant Assay
et al.,	and others.
F	Female
gm	Gram
i.e	introduce examples
IgA	Immunoglobulin A
IgG	Immunoglobulin G
IM	Intramuscular
IU	International unit
IV	Intravascular
kg	Kilogram
M	Male
mg	Milligram
MHz	Megahertz
mm	Millimeter
MRI	magnetic resonance imaging
No.	Number
NSAIDs	Non-steroidal anti-inflammatory drugs
PCR	Polymerase Chain Reaction
pH	potential of Hydrogen
PO	Per os
q6h	Every 6 hours
RT-PCR	reverse transcription- Polymerase Chain Reaction
<i>S. dysgalactiae</i>	<i>Streptococcus dysgalactia</i>
<i>S. equi</i> subsp. <i>equi</i>	<i>Streptococcus equi</i> subspecies <i>equi</i>
<i>S.equi</i>	<i>Streptococcus equi</i>
T	Total
UK	United Kingdom
β-haemolytic	Beta-haemolytic
µm	Micrometer

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